

WHAT IS CLAIMED IS:

1. A current feedback-type operational amplifier comprising multiple input parts and one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output
5 terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output terminal in an amount corresponding to the current that flows to said second input terminal;

said output terminal part comprises a third input terminal and a
10 second output terminal, signals obtained by adding in terms of current the signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

15 one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal
20 becomes zero, and only the signals input to said effective input parts are thereby amplified.

2. The current feedback-type operational amplifier as described in claim 1, wherein all of said multiple input parts and said output part are

made ineffective in response to second external signals; this results in the impedance of said first input terminal and said second input terminal of said ineffective input parts becoming high and the output current from said output terminal becoming zero; and the impedance of said output terminal
5 of said output part becomes high.

3. The current feedback-type operational amplifier according to claim 1, wherein each of said input parts outputs current to said first output terminal in the same amount as the current flowing to said second input
10 terminal.

4. The current feedback-type operational amplifier according to claim 1, wherein each of said input parts comprises a voltage buffer that regards said first input terminal as its input terminal and said second input
15 terminal as its output terminal, and a current mirror circuit connected to said voltage buffer.

5. A signal-switching amplifying apparatus comprising a current feedback-type operational amplifier comprising multiple input parts and
20 one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output

terminal in an amount corresponding to the current that flows to said
second input terminal;

said output terminal part comprises a third input terminal and a
second output terminal, signals obtained by adding in terms of current the
5 signals of all of said multiple input parts are input to said third input
terminal, and the signals input to said third input terminal are converted to
voltage signals, amplified, and output to the second output terminal as an
output signal; and

one of said multiple input parts is made effective and the other of
10 said multiple input parts are made ineffective in response to a first
external signal, the impedance of said first input terminal, said second
input terminal, and said first output terminal of said ineffective input parts
becomes high and the output current from said first output terminal
becomes zero, and only the signals input to said effective input parts are
15 thereby amplified.

6. A variable-gain amplifying apparatus which comprises a current
feedback-type operational amplifier comprising multiple input parts and
one output part, wherein each of said multiple input parts comprises a first
20 input terminal, a second input terminal, and first output terminal, the
signals input from said first input terminal are buffer amplified and output
to said second input terminal, and current is output to the first output
terminal in an amount corresponding to the current that flows to said
second input terminal;

said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal becomes zero, and only the signals input to said effective input parts are thereby amplified.

7. A variable-band amplifying apparatus which comprises a current feedback-type operational amplifier comprising multiple input parts and one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output terminal in an amount corresponding to the current that flows to said second input terminal;

said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the

signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

- 5 one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal
- 10 becomes zero, and only the signals input to said effective input parts are thereby amplified.